

218e A Four Semester Evaluation of Various Techniques for Educating Chemical Engineers

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Four semesters of teaching heat transfer and process control at Tuskegee University has permitted the evaluation of several teaching techniques. One example of a technique that was abandoned is giving quizzes prior to lectures. The quizzes were planned to improve grades and student understanding, but instead they lowered grades and, based on anecdotal evidence, there was no enhancement of student understanding. One example of a technique that survived is a policy of receiving a small bonus for early submissions. Students responded well to the policy and, overall, grades are not inflated because students ask questions early in an attempt to get bonus points but often don't make the early deadline. However, asking questions early improves the quality of the on-time submissions. Finally, one technique that is still being refined is the use of Powerpoint slides for presenting lectures. Based on surveys given to students, the majority of students prefer that the lecture be based primarily in Powerpoint. This result is inconsistent with recent articles published on the topic so more data is needed to support the preliminary findings.